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AVERAGE INTEREST RATES AND AVERAGE TIME TO MATURITY FOR SOCIAL SECURITY TRUST FUND INVESTMENTS, 1991-2002

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An earlier publication in this series¹ described the policies and practices governing investment of assets held by the Old-Age and Survivors Insurance (OASI) and the Disability Insurance (DI) Trust Funds. The investment performance of the trust funds is a direct consequence of these investment policies and amounts available for investment. (Such amounts result principally from the net effect of program expenditures and level of program financing provided by legislatively specified tax rates.) Trust fund investment performance can be characterized in a variety of ways. One way is to compute the effective annual rates of interest earned by the fund assets, as was presented in Actuarial Note 138, *Effective Annual Interest Rates Earned by the OASI and DI Trust Funds, 1940-96*.² This note addresses two additional characteristics of investment experience since 1991: (1) the average nominal interest rate on assets held by the funds and (2) the average time to maturity, for each of the two Social Security Trust Funds. The financial condition of the two trust funds differed markedly in the first half of the 1990s, and their condition affected the two characteristics examined in this note. In order to illustrate the difference, each characteristic is discussed for each trust fund separately. Investment data are presented here on a monthly basis and were provided by the Bureau of Public Debt in the Department of the Treasury. Appendices A and B summarize these data for the OASI and DI Trust Funds, respectively. In addition, the data are available on the Internet. See <http://www.socialsecurity.gov/OACT/ProgData/newIssueRates.html> for new-issue interest rates and <http://www.socialsecurity.gov/OACT/ProgData/invest.html> for average interest rates and average years to maturity. (The latter site provides data for each trust fund separately or combined.)

Background

As described in Actuarial Note 142, the trust funds are required by law to be invested in securities backed by the full faith and credit of the United States Govern-

ment. The law also specifies that the investments be managed by the Secretary of the Treasury. For over 20 years, it has been the policy of the Treasury to invest only in securities issued by the Treasury exclusively to the trust funds. These securities are called special issues and bear interest rates according to a formula set by law. The special-issue interest rate is determined on the last business day of each month and then applies to all securities purchased in the following month. The same interest rate applies to new investments in both of the Social Security Trust Funds. The DI Trust Fund still contains some publicly-issued marketable government bonds, but the amount of such marketable securities held is negligible and hence our discussion of securities will refer exclusively to special-issue securities.

By statute, special-issue securities issued to the trust funds are required to have maturities fixed with due regard for the needs of the funds. In practice, this requirement has led to the following policy. Daily investment activity is restricted to short-term certificates of indebtedness (CIs) that mature on the following June 30. At maturity, the CIs are converted to bonds with maturities ranging from 1 to 15 years. If a trust fund is in financial difficulty, the maturity of the bonds so issued may be only 1 year, but the usual practice is to spread the maturities of the new issues so that the total amount (including bonds purchased in earlier years) maturing over each of the next 15 years is uniformly distributed.

One feature of special-issue securities is that they can be redeemed prior to maturity at par value. Because all income to the funds must be invested, such redemption prior to maturity occurs frequently. Redemption follows a hierarchical procedure: (1) redeem securities with the earliest maturities first; (2) for securities with the same maturity date, redeem those with lower interest rates first; and (3) for securities with the same maturity date and the same interest rate, redeem on a first-in-first-out basis.

As mentioned above, the other key factor affecting investment results is the pattern of accumulation of trust fund assets. The trust funds, considered on a combined basis, have experienced a period of substantial build-up

¹ Actuarial Note 142, *Social Security Trust Fund Investment Policies and Practices*. This note is available on the Internet at <http://www.socialsecurity.gov/OACT/NOTES/note142.html>.

² Available on the Internet at <http://www.socialsecurity.gov/OACT/NOTES/note138.html>.

since the enactment of the 1983 amendments which established the overall financing structure that still prevails. The DI Trust Fund, however, experienced a period of financial distress in the early 1990s which resulted in a reduction of fund assets. DI's financial difficulties led to the enactment of legislation which reallocated a portion of the OASI tax rate to DI. This reallocation, enacted on October 22, 1994, was specified to be retroactive to January 1, 1994, and resulted in a transfer of about \$14 billion from OASI to DI in November 1994. Thus, the patterns of asset accumulation over this period have varied significantly by trust fund, as illustrated in figures 1 and 2. Note the scales for the vertical axis in the two figures differ to reflect the relative size difference of the two funds.

Figure 1.—OASI Trust Fund Assets at End of Months, 1983-2002
[In billions]

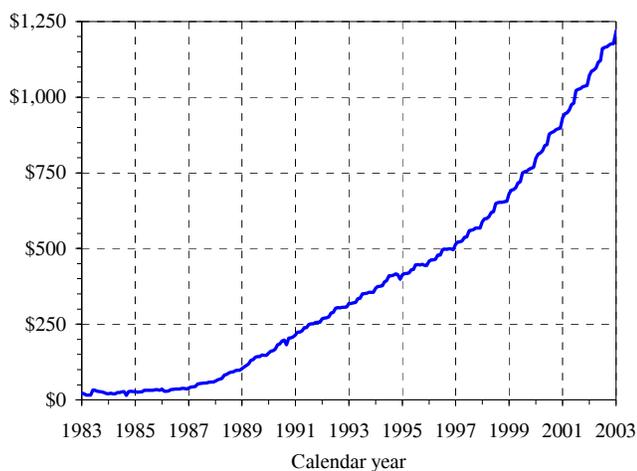
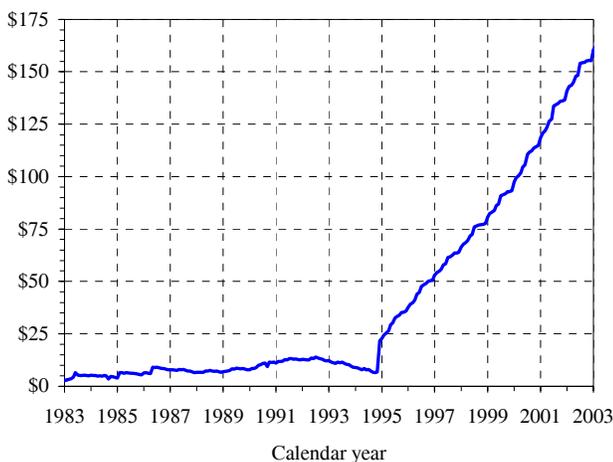


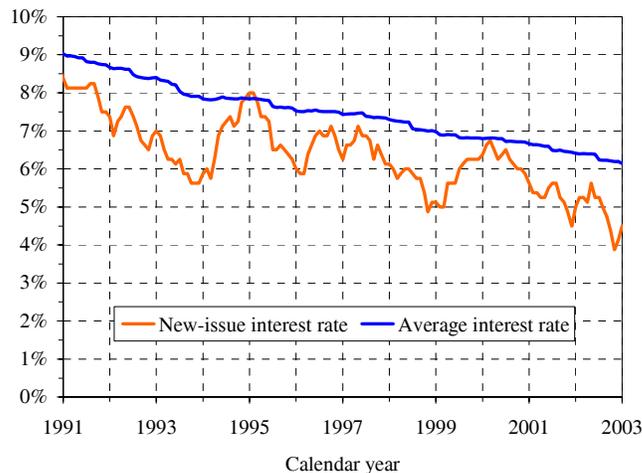
Figure 2.—DI Trust Fund Assets at End of Months, 1983-2002
[In billions]



Average interest rates

In figure 3, two sets of interest rates are shown for the OASI Trust Fund: the interest rate applicable to special-issue securities acquired throughout a month—the so-called “new-issue interest rate”—and the average interest rate³ on all securities held by the fund at the end of each month. Two observations are readily apparent. First, the new-issue rate shows a downward trend over the period under investigation. Second, as a result of declining new-issue rates, the average rate is generally above the new-issue rate in this period.

Figure 3.—New-Issue and Average Interest Rates, OASI Trust Fund



The table below shows interest rates on special-issue bonds acquired (new issues) in years 1980-2002. These rates were higher during the 1980s and in 1990 than the rate for January 1991 (8.125 percent). Thus, the average interest rate on all securities held at the beginning of 1991, the bulk of which consisted of bonds acquired in the 1980s and in 1990, was also higher than the new-issue rate for 1991. Then, as interest rates on new securities declined in the 1990s, the fund's portfolio gradually acquired lower-rate securities and its higher-rate securities matured. But the weighted average for all its securities—which is the average rate shown in figure 3—generally remained higher than the new-issue rate because (1) the fund still held high-rate bonds acquired in the 1980s, and (2) the redemption policy requires that, for securities with the same maturity date, those with lower interest rates must be redeemed first.

³ The average is weighted by the amount of securities held at each interest rate.

**New-Issue Interest Rates on Special-Issue Bonds
by Year Acquired, 1980-2002**

[In percent]

Year	Rate	Year	Rate	Year	Rate
1980	9.750	1990	8.750	2000	6.500
1981	13.000	1991	8.125	2001	5.625
1982	13.250	1992	7.375	2002	5.250
1983	10.750	1993	6.250		
1984	13.750	1994	7.250		
1985	10.375	1995	6.500		
1986	8.375	1996	7.000		
1987	8.625	1997	6.875		
1988	9.250	1998	5.875		
1989	8.750	1999	6.000		

Note: Each rate shown is the rate for June of the stated year.

Figure 4 shows a similar comparison for the DI Trust Fund. Prior to June 1995, the average interest rate for DI is approximately the same as that for OASI. Then, in June 1995, the average rate for DI dropped significantly. This drop resulted from the reallocation of the OASI and DI tax rates in 1994. Accounting for the timing of the precipitous drop in the average interest rate on invested DI assets requires some additional comment.

- As mentioned earlier, the reallocation of tax rates was enacted in October 1994, but made retroactively effective to January 1994. The retroactive effective date resulted in a \$14 billion transfer of assets from OASI to DI in November 1994. Following normal procedures, this \$14-billion amount newly acquired by DI was invested in special-issue CIs bearing the November 1994 new-issue rate of 7.875 percent, only slightly less than DI's average rate for the end of October 1994. Thus, there was no significant drop in the DI average interest rate for November.
- Beginning in February 1995, interest rates on new securities fell sharply, reaching 6.5 percent in June 1995. Even though rates fell during this period, redemption policy allowed DI to hold onto most of its higher-rate CIs. However, at the end of June, all the CIs were rolled over into bonds at the June rate. For the DI Trust Fund, this rollover converted about 88 percent of its entire portfolio into 6.5-percent bonds, thus reducing its average interest rate at the end of June to about 6.7 percent (a drop of over 1.1 percentage points from the end of May to the end of June). In contrast, the rollover for the OASI Trust Fund converted only about 14 percent of its portfolio into 6.5-percent bonds. Although this rollover also pulled down the average interest rate for OASI, the effect was correspondingly smaller (a drop of less than 0.2 percentage point).

Figure 4.—New-Issue and Average Interest Rates, DI Trust Fund

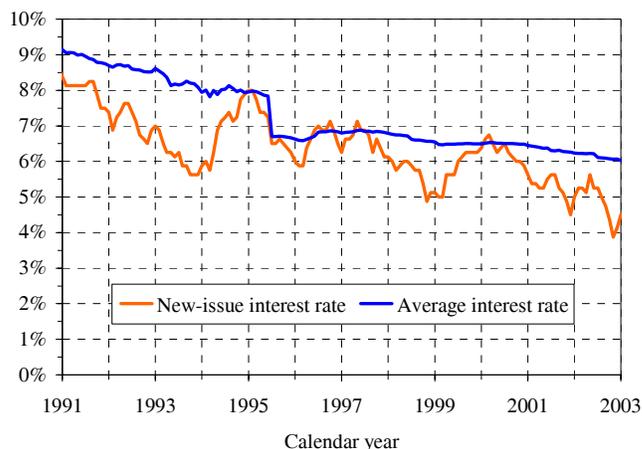
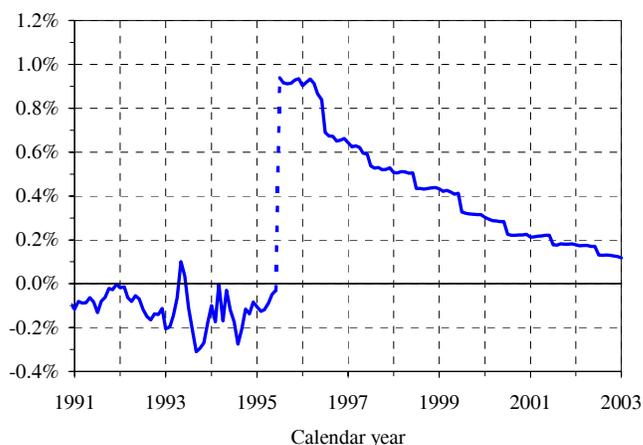


Figure 5 displays the difference in average interest rates earned by the two trust funds. The difference between the average rates for the two funds was very small prior to June 1995. Then the June 1995 rollover brought about the relatively large change in DI average rates, as described above, and the difference between the average rates at the end of June increased to over 0.9 percentage point. Thereafter, the difference declined as both funds redeemed older securities and acquired new securities bearing the same interest rates.

Figure 5.—Difference Between Trust Fund Average Interest Rates, OASI Rate Less DI Rate



Average time to maturity

Figure 6 shows the pattern of the average time to maturity⁴ for the OASI Trust Fund. This sawtooth pattern⁵ is

⁴ The average is weighted by the amount of securities held at each maturity date.

⁵ Relatively large changes from the end of one month to the next are indicated with a dashed line.

typical for a fund that is experiencing positive cash-flow balances (given the specific investment policy used for the OASI and DI funds). Under this condition, the roll-over policy is to spread the maturity dates of special-issue bonds as evenly as possible over dates of June 30 for each of the next 15 years. Thus, the average time to maturity on that date is about 8 years. (The average time would be exactly 8 years were it not for the fact that all investments are in multiples of a \$1,000. As shown in appendix A, the average to three decimal places is 8.000 even with the slight distortion caused when the total asset amount is not evenly divisible by 15.)

Following the June rollover, as CIs that will mature on the next June 30 are acquired, the average time to maturity for the entire trust fund portfolio steadily declines. Because we are graphing monthly (at end of month) results, the figure indicates that the low points in the pattern are reached at the end of each May. However, if we graphed *daily* (instead of monthly) maturity data, we would see the low points occurring at the end of each June 29.

Figure 6.—Average Time to Maturity, OASI Trust Fund

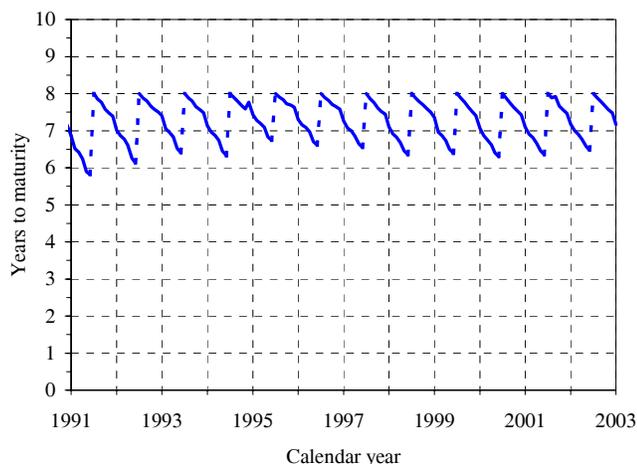
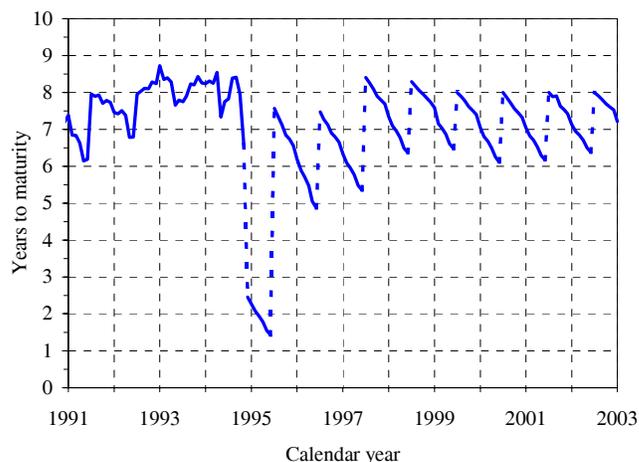


Figure 7 shows the average time to maturity for the DI Trust Fund. Not surprisingly, the financial problem encountered by DI in the early 1990s results in a pattern of changing asset maturities that differs significantly from the regular pattern displayed for OASI in figure 6. The first notable difference occurs during the period July 1992-September 1994. During this period the DI Trust Fund was declining rapidly and the average time to maturity fluctuated within the range of 7.3 to 8.7 years. For all but 2 months of this period (June 1993 and June 1994), the average time to maturity for DI was higher than the corresponding average time for OASI. Factors that account for the differences are as follows.

- Because the DI fund was declining, not only CIs from current tax income, but also bonds acquired in earlier years, needed to be redeemed to cover expenses. Based on trust fund investment policy, bonds with the earliest maturities were redeemed first, resulting in a gradual increase in the average maturity date of remaining bonds. As a result, in months where the fund held relatively small amounts of CIs and held bonds with relatively distant maturity years, the average number of years to maturity rose above 8, peaking at about 8.7 years at the end of December 1992.

Figure 7.—Average Time to Maturity, DI Trust Fund



- Two different factors tended to counteract the increasing trend in average maturity time described above. First, the June 30 rollover practice of spreading bond maturities equally over 15 years was superseded by the legal requirement that maturities be fixed with due regard for the need of the fund. Thus in June of 1993 and 1994 (the 2 exceptional months cited above), newly acquired bonds had maturities of only 1 year. Even though other bonds held at the end of those 2 months had much longer maturities, the average time to maturity on June 30 of these years was less than 8.

Second, as bonds were redeemed to cover expenses and new CIs were acquired through current tax income, CIs grew to be a larger proportion (ignoring zero proportions on each June 30) of DI's investment portfolio as compared to OASI's. For example, at the end of July 1992, DI's CI proportion was 10.0 percent of its total portfolio compared to OASI's 4.3 percent, already an indication of DI's bond depletion. At the end of September 1994, DI's proportion was 29.1 percent while OASI's proportion was only 4.9 percent. Thus,

with CIs having a time to maturity of less than a year, the relatively higher proportion of CIs held by DI tended to pull down average time to maturity.

Just as the reallocation of tax rates in 1994 had a substantial effect on the average DI interest rate, it also affected the DI average time to maturity. The \$14 billion redeemed from OASI and transferred to DI in November 1994 was invested in CIs maturing on the next June 30. As of November 30, 1994, this amount represented 63 percent of DI's investment portfolio and had only 7 months to maturity. Thus, the average time to maturity dropped from almost 6.6 years as of October 31, 1994, to about 2.4 years on November 30, 1994. Under the reallocated tax rates, DI then acquired more CIs and needed to redeem a smaller portion of the CIs that it acquired. Consequently, from November 1994 through May 1995, the average time to maturity slowly declined, reaching a low of approximately 1.4 years by the end of May 1995. Finally, as indicated in figure 7, the sawtooth

pattern for the DI Trust Fund after June 1995 became similar to that for the OASI Trust Fund because positive cash flow had been restored by the reallocation.

Conclusion

A study of average interest rates and average time to maturity for 1991-2002 provides insight into the investment operations of the Social Security Trust Funds. In particular, the investment rules and procedures explain the patterns in these two characteristics. Also, adequate financing or lack thereof is shown to have a substantial impact on the characteristics.

APPENDIX A

Monthly Investment Data for the OASI Trust Fund, 1991-2002

Year	Month	Interest rates (%)		Average years to maturity	Year	Month	Interest rates (%)		Average years to maturity	Year	Month	Interest rates (%)		Average years to maturity
		New issue	Average				New issue	Average				New issue	Average	
1991	Jan	8.125	8.974	6.512	1995	Jan	8.000	7.849	7.284	1999	Jan	5.000	6.897	6.966
	Feb	8.125	8.972	6.422		Feb	7.750	7.839	7.205		Feb	5.000	6.889	6.861
	Mar	8.125	8.958	6.238		Mar	7.375	7.823	7.088		Mar	5.625	6.905	6.728
	Apr	8.125	8.922	5.898		Apr	7.375	7.810	6.832		Apr	5.625	6.897	6.505
	May	8.125	8.922	5.814		May	7.250	7.804	6.733		May	5.625	6.894	6.387
	Jun	8.125	8.823	8.000		Jun	6.500	7.643	8.000		Jun	6.000	6.818	8.000
	Jul	8.250	8.808	7.851		Jul	6.500	7.615	7.906		Jul	6.125	6.817	7.877
	Aug	8.250	8.805	7.768		Aug	6.625	7.621	7.834		Aug	6.250	6.818	7.770
	Sep	7.875	8.765	7.578		Sep	6.500	7.609	7.720		Sep	6.250	6.813	7.630
	Oct	7.500	8.745	7.477		Oct	6.375	7.613	7.687		Oct	6.250	6.810	7.508
	Nov	7.500	8.739	7.388		Nov	6.250	7.604	7.631		Nov	6.250	6.809	7.407
	Dec	7.375	8.673	7.008		Dec	6.000	7.527	7.306		Dec	6.375	6.797	7.062
1992	Jan	6.875	8.638	6.870	1996	Jan	5.875	7.508	7.161	2000	Jan	6.625	6.804	6.868
	Feb	7.250	8.651	6.772		Feb	5.875	7.510	7.089		Feb	6.750	6.817	6.757
	Mar	7.375	8.643	6.606		Mar	6.375	7.529	6.968		Mar	6.500	6.815	6.618
	Apr	7.625	8.618	6.256		Apr	6.625	7.527	6.701		Apr	6.250	6.797	6.405
	May	7.625	8.620	6.126		May	6.875	7.547	6.606		May	6.375	6.801	6.299
	Jun	7.375	8.478	7.999		Jun	7.000	7.514	7.999		Jun	6.500	6.725	7.999
	Jul	7.125	8.430	7.875		Jul	6.875	7.511	7.895		Jul	6.250	6.726	7.871
	Aug	6.750	8.400	7.797		Aug	6.875	7.508	7.823		Aug	6.125	6.719	7.741
	Sep	6.625	8.383	7.667		Sep	7.125	7.512	7.710		Sep	6.000	6.713	7.626
	Oct	6.500	8.377	7.583		Oct	6.875	7.506	7.643		Oct	6.000	6.711	7.521
	Nov	6.875	8.395	7.496		Nov	6.500	7.492	7.582		Nov	5.875	6.707	7.424
	Dec	7.000	8.402	7.411		Dec	6.250	7.436	7.262		Dec	5.625	6.663	7.098
1993	Jan	6.875	8.341	7.051	1997	Jan	6.625	7.442	7.077	2001	Jan	5.375	6.640	6.914
	Feb	6.500	8.320	6.955		Feb	6.625	7.450	6.992		Feb	5.375	6.635	6.811
	Mar	6.250	8.299	6.834		Mar	6.750	7.448	6.860		Mar	5.250	6.619	6.663
	Apr	6.250	8.226	6.523		Apr	7.125	7.465	6.644		Apr	5.250	6.594	6.463
	May	6.125	8.210	6.405		May	6.875	7.469	6.545		May	5.500	6.597	6.349
	Jun	6.250	8.036	8.000		Jun	6.875	7.381	8.000		Jun	5.625	6.484	8.000
	Jul	5.875	7.965	7.880		Jul	6.750	7.376	7.863		Jul	5.625	6.479	7.888
	Aug	5.875	7.943	7.806		Aug	6.250	7.354	7.753		Aug	5.250	6.494	7.920
	Sep	5.625	7.906	7.645		Sep	6.625	7.359	7.611		Sep	5.125	6.460	7.668
	Oct	5.625	7.909	7.571		Oct	6.375	7.351	7.521		Oct	4.875	6.453	7.568
	Nov	5.625	7.909	7.488		Nov	6.125	7.342	7.444		Nov	4.500	6.443	7.472
	Dec	5.875	7.843	7.135		Dec	6.125	7.296	7.107		Dec	5.000	6.407	7.173
1994	Jan	6.000	7.828	6.966	1998	Jan	6.000	7.271	6.919	2002	Jan	5.250	6.399	7.001
	Feb	5.750	7.817	6.875		Feb	5.750	7.260	6.823		Feb	5.250	6.402	6.904
	Mar	6.250	7.831	6.740		Mar	5.875	7.251	6.679		Mar	5.125	6.391	6.773
	Apr	6.875	7.849	6.453		Apr	6.000	7.229	6.459		Apr	5.625	6.392	6.583
	May	7.125	7.891	6.323		May	6.000	7.225	6.351		May	5.250	6.387	6.472
	Jun	7.250	7.858	8.000		Jun	5.875	7.053	8.000		Jun	5.250	6.239	8.000
	Jul	7.375	7.853	7.896		Jul	5.750	7.037	7.884		Jul	5.000	6.230	7.887
	Aug	7.125	7.842	7.796		Aug	5.750	7.028	7.786		Aug	4.750	6.223	7.790
	Sep	7.250	7.844	7.685		Sep	5.375	7.018	7.701		Sep	4.375	6.206	7.671
	Oct	7.750	7.869	7.590		Oct	4.875	7.000	7.593		Oct	3.875	6.194	7.571
	Nov	7.875	7.850	7.771		Nov	5.125	7.003	7.501		Nov	4.125	6.194	7.477
	Dec	8.000	7.847	7.432		Dec	5.125	6.985	7.354		Dec	4.500	6.147	7.169

Note: A new-issue interest rate applies to any new investments throughout a month; an average interest rate and average years to maturity are as of the end of a month.

APPENDIX B

Monthly Investment Data for the DI Trust Fund, 1991-2002

Year	Month	Interest rates (%)		Average years to maturity	Year	Month	Interest rates (%)		Average years to maturity	Year	Month	Interest rates (%)		Average years to maturity
		New issue	Average				New issue	Average				New issue	Average	
1991	Jan	8.125	9.054	6.843	1995	Jan	8.000	7.974	2.076	1999	Jan	5.000	6.475	7.149
	Feb	8.125	9.060	6.831		Feb	7.750	7.957	1.937		Feb	5.000	6.464	7.021
	Mar	8.125	9.044	6.629		Mar	7.375	7.911	1.777		Mar	5.625	6.487	6.865
	Apr	8.125	8.985	6.141		Apr	7.375	7.859	1.548		Apr	5.625	6.489	6.608
	May	8.125	9.005	6.190		May	7.250	7.833	1.422		May	5.625	6.482	6.470
	Jun	8.125	8.954	7.956		Jun	6.500	6.703	7.573		Jun	6.000	6.492	8.001
	Jul	8.250	8.887	7.896		Jul	6.500	6.699	7.343		Jul	6.125	6.495	7.885
	Aug	8.250	8.866	7.932		Aug	6.625	6.710	7.119		Aug	6.250	6.499	7.776
	Sep	7.875	8.786	7.707		Sep	6.500	6.694	6.845		Sep	6.250	6.496	7.616
	Oct	7.500	8.772	7.783		Oct	6.375	6.684	6.733		Oct	6.250	6.495	7.512
	Nov	7.500	8.742	7.735		Nov	6.250	6.669	6.553		Nov	6.250	6.494	7.406
	Dec	7.375	8.691	7.457		Dec	6.000	6.624	6.200		Dec	6.375	6.495	7.041
1992	Jan	6.875	8.651	7.421	1996	Jan	5.875	6.589	5.888	2000	Jan	6.625	6.510	6.806
	Feb	7.250	8.714	7.506		Feb	5.875	6.577	5.715		Feb	6.750	6.529	6.668
	Mar	7.375	8.723	7.383		Mar	6.375	6.617	5.474		Mar	6.500	6.528	6.502
	Apr	7.625	8.673	6.783		Apr	6.625	6.661	5.048		Apr	6.250	6.514	6.254
	May	7.625	8.689	6.794		May	6.875	6.707	4.871		May	6.375	6.518	6.114
	Jun	7.375	8.595	7.952		Jun	7.000	6.824	7.472		Jun	6.500	6.500	7.999
	Jul	7.125	8.578	8.036		Jul	6.875	6.837	7.276		Jul	6.250	6.505	7.859
	Aug	6.750	8.564	8.114		Aug	6.875	6.836	7.122		Aug	6.125	6.498	7.713
	Sep	6.625	8.520	8.103		Sep	7.125	6.861	6.903		Sep	6.000	6.490	7.560
	Oct	6.500	8.517	8.281		Oct	6.875	6.851	6.778		Oct	6.000	6.488	7.449
	Nov	6.875	8.508	8.246		Nov	6.500	6.830	6.651		Nov	5.875	6.482	7.327
	Dec	7.000	8.608	8.721		Dec	6.250	6.794	6.319		Dec	5.625	6.451	7.044
1993	Jan	6.875	8.538	8.350	1997	Jan	6.625	6.818	6.095	2001	Jan	5.375	6.426	6.828
	Feb	6.500	8.466	8.398		Feb	6.625	6.821	5.944		Feb	5.375	6.418	6.702
	Mar	6.250	8.364	8.282		Mar	6.750	6.827	5.767		Mar	5.250	6.400	6.528
	Apr	6.250	8.125	7.657		Apr	7.125	6.870	5.486		Apr	5.250	6.372	6.294
	May	6.125	8.175	7.795		May	6.875	6.878	5.357		May	5.500	6.376	6.167
	Jun	6.250	8.147	7.745		Jun	6.875	6.843	8.400		Jun	5.625	6.307	8.000
	Jul	5.875	8.176	7.909		Jul	6.750	6.850	8.259		Jul	5.625	6.303	7.883
	Aug	5.875	8.252	8.231		Aug	6.250	6.824	8.101		Aug	5.250	6.312	7.904
	Sep	5.625	8.200	8.206		Sep	6.625	6.839	7.897		Sep	5.125	6.279	7.630
	Oct	5.625	8.179	8.429		Oct	6.375	6.829	7.798		Oct	4.875	6.273	7.538
	Nov	5.625	8.087	8.257		Nov	6.125	6.814	7.691		Nov	4.500	6.261	7.427
	Dec	5.875	7.942	8.247		Dec	6.125	6.789	7.343		Dec	5.000	6.230	7.128
1994	Jan	6.000	8.002	8.309	1998	Jan	6.000	6.766	7.092	2002	Jan	5.250	6.225	6.945
	Feb	5.750	7.819	8.251		Feb	5.750	6.749	6.957		Feb	5.250	6.227	6.844
	Mar	6.250	8.000	8.540		Mar	5.875	6.741	6.773		Mar	5.125	6.216	6.709
	Apr	6.875	7.878	7.336		Apr	6.000	6.725	6.494		Apr	5.625	6.222	6.500
	May	7.125	8.011	7.749		May	6.000	6.720	6.365		May	5.250	6.216	6.382
	Jun	7.250	8.032	7.822		Jun	5.875	6.618	8.296		Jun	5.250	6.108	8.000
	Jul	7.375	8.128	8.382		Jul	5.750	6.602	8.173		Jul	5.000	6.100	7.904
	Aug	7.125	8.049	8.414		Aug	5.750	6.597	8.048		Aug	4.750	6.092	7.805
	Sep	7.250	7.960	7.953		Sep	5.375	6.584	7.956		Sep	4.375	6.076	7.689
	Oct	7.750	8.006	6.587		Oct	4.875	6.563	7.848		Oct	3.875	6.068	7.609
	Nov	7.875	7.933	2.449		Nov	5.125	6.564	7.734		Nov	4.125	6.070	7.522
	Dec	8.000	7.953	2.265		Dec	5.125	6.552	7.587		Dec	4.500	6.029	7.217

Note: A new-issue interest rate applies to any new investments throughout a month; an average interest rate and average years to maturity are as of the end of a month.